

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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In the Application of: MacInnis)	Electronically Filed
U.S. Serial No.: 10/762,937)	Dated: 4/2/07
Filed: Jan. 21, 2004)	
For: Graphics Display System with Window Descriptors)	
Examiner: Brier)	
Group Art Unit: 2672)	
Confirmation No. 5694)	

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

This is an appeal from the Office Action made Final mailed June 2, 2006 in which claims 21-39 were rejected. A Notice of Appeal was filed with the United States Patent and Trademark Office on November 2, 2006. The deadline for filing this appeal brief is April 2, 2007, pursuant to Appellant's petition for a two month extension filed concurrently herewith. The Commissioner is hereby authorized to charge any requisite fees to Deposit Account No. 13-0017.

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I. REAL PARTY IN INTEREST

Broadcom Corporation, a corporation organized under the laws of the state of California and having a place of business at 16215 Alton Parkway, Irvine California 92618-3616, has acquired the entire right, title, and interest in and to the invention, the application, and any and all patents to be obtained therefore, as set forth in the Assignment filed with the present application and recorded on October 29, 2003 at Reel 010625, Frame 0756.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 21-39 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.

Claims 21-39 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.

IV. STATUS OF AMENDMENTS

There are no amendments pending in the present application.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 21 is directed to a graphics display system. The graphics display system comprises a data structure memory, and a graphics processor. The graphics processor processes graphics images to be display on a display. A data structure is stored in the data structure memory. The data structure defines a corresponding one of a plurality of logical surfaces on which the graphics images

are arranged. At least one of the graphics images includes pixels of a single color. The data structure comprises a field indicating a relative depth of the corresponding one of the logical surfaces, a field indicating a location of the corresponding one of the logical surfaces, and a field indicating a color of the corresponding one of the logical surfaces, wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces.

The specification describes a graphics display system in, for example, Figure 1. The graphics display system comprises a data structure memory, for example, Figure 1, memory 28, and a graphics processor, for example, Figure 1, graphics chip. A data structure, for example, Figure 6, is stored in the data structure memory. The data structure defines a corresponding one of a plurality of logical surfaces, for example, ¶0012, on which the graphics images are arranged, for example, ¶0115. At least one of the graphics images includes pixels of a single color, for example, ¶0101. The data structure comprises a field indicating a relative depth of the corresponding one of the logical surfaces, for example, Figure 6, "WIN_LAYER[31:28], a field indicating a location of the corresponding one of the logical surfaces, for example, Figure 6, "WINDOW MEMORY START [25:0]", and a field indicating a color of the corresponding one of the logical surfaces, for example, Figure 6, "WINDOW COLOR[15:0], wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces, for example, ¶0094.

Claim 28 is directed to a method of using a data structure to define a corresponding one of a plurality of logical surfaces on which graphics images are arranged, at least one of the graphics images including pixels of a single color, the method comprising indicating, in the data structure, a relative depth of the corresponding one of the logical surfaces on a display; indicating, in the data structure, a location of the corresponding one of the logical surfaces on the display; indicating, in the data structure, a color of the corresponding one of the logical surfaces; and generating the pixels of the single color for the at least one

of the graphics images by applying the single color to the corresponding one of the logical surfaces using the color specified in the data structure.

The specification describes a method of using a data structure to define a corresponding one of a plurality of logical surfaces, for example, ¶0012, on which graphics images are arranged, for example, ¶0115, at least one of the graphics images including pixels of a single color, for example, ¶0101, the method comprising indicating, in the data structure, a relative depth of the corresponding one of the logical surfaces on a display, for example, Figure 6, “WIN LAYER[31:28]”; indicating, in the data structure, a location of the corresponding one of the logical surfaces on the display, for example, Figure 6, “WINDOW MEMORY START [25:0]”; indicating, in the data structure, a color of the corresponding one of the logical surfaces, for example, Figure 6, “WINDOW COLOR[15:0]”; and generating the pixels of the single color for the at least one of the graphics images by applying the single color to the corresponding one of the logical surfaces using the color specified in the data structure, for example, ¶0094.

Claim 35 is directed to a method of displaying graphics images including a graphics image having pixels of a single color, comprising: generating a plurality of data structures, each data structure defining a corresponding one of a plurality of windows on which graphics images are arranged; sorting the data structures in accordance with an order in which the corresponding windows are displayed; and generating the pixels of the at least one graphics image including pixels of the single color using color information stored in the data structure, wherein the graphics image including pixels of the single color is generated by applying the single color to a corresponding one of the windows using the color information.

The specification describes a method of displaying graphics images including a graphics image having pixels of a single color, for example, ¶0115, comprising: generating a plurality of data structures, each data structure defining a corresponding one of a plurality of windows on which graphics images are arranged, for example, ¶0012; sorting the data structures in accordance with an order in which the corresponding windows are displayed, for example, Figure 7,

Sorting 304, ¶0130; and generating the pixels of the at least one graphics image including pixels of the single color using color information stored in the data structure, wherein the graphics image including pixels of the single color is generated by applying the single color to a corresponding one of the windows using the color information, for example, ¶0094.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 21, 22, 25-29, 32-39 are unpatentable under 35 U.S.C. §112, ¶1, as failing to comply with the written description requirement.

Whether claims 21, 22, 25-29, 32-39 are unpatentable under 35 U.S.C. §112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

VII. ARGUMENT: CLAIMS 21, 22, 25-29, AND 32-39.

Claim 21 stands rejected under 35 U.S.C. § 112, ¶1 and ¶2 as failing to comply with the written description requirement, and being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 is reproduced as follows:

21. A graphics display system comprising:

a data structure memory;

a graphics processor for processing graphics images to be displayed on a display;

a data structure stored in the data structure memory, the data structure for defining a corresponding one of a plurality of logical surfaces on which the graphics images are arranged, at least one of the graphics images includes pixels of a single color, the data structure comprising:

a field indicating a relative depth of the corresponding one of the logical surfaces;

a field indicating a location of the corresponding one of the logical surfaces; and

a field indicating a color of the corresponding one of the logical surfaces, wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces.

Examiner has rejected claim 21 for failure to provide a written description and indefiniteness with respect to the limitations, “single color”, and “wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces”.

A. “pixels of a single color”

In the Final Office Action, Examiner notes that the limitation “pixels of a single color” “is not further defined in the specification and thus the specification does not convey how pixels can be other than a ‘single color’ since the pixel is the basic picture element of the display device which would have a single color.” Final Office Action (FOA), p. 3.

As an initial matter, Appellant submits that if “the specification does not convey how pixels can be other than a ‘single color’”, the specification provides a written description of “pixels of a single color.” Accordingly, the specification meets the requirements of 35 U.S.C. § 112, ¶1, to “contain a written description of the invention”, including the limitation, “pixels of a single color”.

The rejection to claim 21, “pixels of a single color” under 35 U.S.C. § 112, ¶2, are grounded on the exact same basis, “pixels of a single color” “is not further defined in the specification and thus the specification does not convey how pixels can be other than a ‘single color’ since the pixel is the basic picture element of

the display device which would have a single color.” Final Office Action (FOA), p. 5.

Conveying how “pixels can be other than a ‘single color’”, is not a requirement for particularly pointing out and distinctly claiming the subject matter which applicant regards as the invention. Examiner cites no legal authority, holding that an applicant was required to describe something which was not claimed, to particularly point out and distinctly claim the subject matter which applicant regarded as the invention.

Accordingly, Appellant respectfully submits that the claimed “pixels of a single color” are supported by the written description, and particularly point out and distinctly claim the subject matter which applicant regards as the invention.

B. “wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces”

In the Final Office Action, Examiner notes that “It is not clear in the claim how applicant is using the color in the color field to generate the pixels in the graphics image having that color”. FOA, p. 3.

As an initial matter, the claim does state how applicant is using “the color indicating field” to generate “the pixels for the graphics image including pixels of the single color” – “by applying the single color to the corresponding one of the logical surfaces”.

Additionally, the statement that “It is not clear in the claim how applicant is using the color in the color field to generate the pixels in the graphics image having that color”, at FOA, p. 3, or that “the specification page 34, lines 14-20 describes blending the graphics images with the windows” does not establish that a person skilled in the art would not recognize that the written description (in its entirety) of the invention provides support.

Additionally, Appellant submits that the written description does provide support for the limitation, for example, and not by limitation, at ¶¶0094, 0105. It is

now respectfully submitted that the written the whole record now demonstrates that the written description requirement is satisfied.

The basis for the rejection of claim 21, for failure to particular point out and distinctly claim “wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces”, at FOA, 5, is almost identical, *verbatim*, to the grounds for the rejection of claim 21 for failure to provide a written description of “wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces”, at FOA, 3.

Again, the claim does state how applicant is using “the color indicating field” to generate “the pixels for the graphics image including pixels of the single color” – “by applying the single color to the corresponding one of the logical surfaces”.

Accordingly, Appellant respectfully submits that the claimed “wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces” are supported by the written description, and particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Thus for at least the foregoing reasons, the Board is respectfully requested to REVERSE the rejection to claim 21.

C. CLAIMS 28 AND 35

Examiner has indicated that these claims “have the same indefinite issues found in claim 21.” Thus for at least the foregoing reasons, the Board is also requested to REVERSE the rejections to claim 28 and 35.

D. CLAIMS 22, 25, 26, 27, 29, 32-39

These claims were apparently rejected on the grounds of their dependency to claims 21, 28, and 35. Thus for at least the foregoing reasons, the Board is also requested to REVERSE the rejections to claim 22, 25, 26, 27, 29, 32-39.

VIII. CONCLUSION

For at least the foregoing reasons, the Board of Patent Appeals and Interferences is respectfully requested to REVERSE the rejection to claims 21, 22, 25-29, and 32-39.

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Respectfully submitted,



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CLAIMS APPENDIX

1-20. (Cancelled).

21. A graphics display system comprising:

a data structure memory;

a graphics processor for processing graphics images to be displayed on a display;

a data structure stored in the data structure memory, the data structure for defining a corresponding one of a plurality of logical surfaces on which the graphics images are arranged, at least one of the graphics images including pixels of a single color, the data structure comprising:

a field indicating a relative depth of the corresponding one of the logical surfaces;

a field indicating a location of the corresponding one of the logical surfaces on the display; and

a field indicating a color of the corresponding one of the logical surfaces, wherein the pixels for the graphics image including pixels of the single color are generated using the color indicating field by applying the single color to the corresponding one of the logical surfaces.

22. The graphics display system of claim 21, wherein the data structure further comprises at least one of a field indicating an alpha value for the graphics image on the corresponding one of the logical surfaces, a field indicating a location in memory where the graphics image for the corresponding one of the logical surfaces is stored, or a field indicating a format of the graphics image to be displayed on the corresponding one of the logical surfaces.

23. The graphics display system of claim 22, wherein the format of the graphics image is any one selected from a group consisting of YUV, RGB, CLUT and alpha-only formats.

24. The graphics display system of claim 23, wherein the alpha-only format is a format in which the graphics image is represented in the memory by alpha values only.

25. The graphics display system of claim 21, further comprising a field indicating a method of selecting an alpha value for each pixel in the graphics image on the corresponding one of the logical surfaces.

26. The graphics display system of claim 25, wherein the alpha value for each pixel is selected using chroma keying, CLUT alpha values, luminance (Y) values or a window alpha value.

27. The graphics display system of claim 22, wherein the alpha value contained in the field indicating the alpha value is applied to pixels of the graphics image on the corresponding one of the logical surfaces.

28. A method of using a data structure to define a corresponding one of a plurality of logical surfaces on which graphics images are arranged, at least one of the graphics images including pixels of a single color, the method comprising:

- indicating, in the data structure, a relative depth of the corresponding one of the logical surfaces on a display;

- indicating, in the data structure, a location of the corresponding one of the logical surfaces on the display;

- indicating, in the data structure, a color of the corresponding one of the logical surfaces; and

- generating the pixels of the single color for the at least one of the graphics images by applying the single color to the corresponding one of the logical surfaces using the color specified in the data structure.

29. The method of claim 28, further comprising indicating in the data structure for the corresponding one of the logical surfaces, at least one of an alpha value for the graphics image, a location in memory where the graphics image is stored, or a format of the graphics image to be displayed.

30. The method of claim 29, wherein the format of the graphics image is any one selected from a group consisting of YUV, RGB, CLUT and alpha-only formats.

31. The method of claim 30, wherein the alpha-only format is a format in which the graphics image is represented in the memory by alpha values only.

32. The method of claim 28, further comprising indicating, in the data structure, a method of selecting an alpha value for each pixel in the graphics image on the corresponding one of the logical surfaces.

33. The method of claim 32, wherein the alpha value for each pixel is selected using chroma keying, CLUT alpha values, luminance (Y) values or a window alpha value.

34. The method of claim 29, further comprising applying the alpha value for the graphics image to pixels of the graphics image on the corresponding one of the logical surfaces.

35. A method of displaying graphics images including a graphics image having pixels of a single color, comprising:

generating a plurality of data structures, each data structure defining a corresponding one of a plurality of windows on which graphics images are arranged;

sorting the data structures in accordance with an order in which the corresponding windows are displayed; and

generating the pixels of the at least one graphics image including pixels of the single color using color information stored in the data structure, wherein the graphics image including pixels of the single color is generated by applying the single color to a corresponding one of the windows using the color information.

36. The method of claim 35, wherein the data structure includes a field indicating a color of the graphics image, and wherein the color indicating field is used to generate the pixels.

37. The method of claim 35, wherein each of the data structures has a field indicating a relative depth of the corresponding one of the windows, which is used to sort the data structures.

38. The method of claim 35, wherein at least one of the data structures includes a field indicating an alpha value for the graphics image on the corresponding one of the windows.

39. The method of claim 35, wherein at least one of the data structures includes a location of the corresponding one of the windows on a display.

EVIDENCE APPENDIX

There are no pages in this Appendix.

RELATED PROCEEDINGS APPENDIX

There are no pages in this Appendix.